

VERTICAL JFET LIMITED SILICON CARBIDE POWER METAL-OXIDE SEMICONDUCTOR FIELD EFFECT TRANSISTORS AND METHODS OF FABRICATING VERTICAL JFET LIMITED SILICON CARBIDE METAL-OXIDE SEMICONDUCTOR FIELD EFFECT TRANSISTORS

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Abstract of the Disclosure

Silicon carbide metal-oxide semiconductor field effect transistors (MOSFETs) may include an n-type silicon carbide drift layer, a first p-type silicon carbide region adjacent the drift layer and having a first n-type silicon carbide region therein, an oxide layer on the drift layer, and an n-type silicon carbide limiting region disposed between the drift layer and a portion of the first p-type region. The limiting region may have a carrier concentration that is greater than the carrier concentration of the drift layer. Methods of fabricating silicon carbide MOSFET devices are also provided.

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